ABSTRACT

The invention relates to a method of high throughput chemical analysis comprising the steps of combining one test compound with a solution comprising m enzyme(s) and n substrate(s), wherein m is an integer equal to one or greater, n is an integer equal to one or greater, and $m + n \geq 3$, incubating for a period of time said test compound within said solution, separating the chemical species in said combined solution by a chromatography step after said incubating step, and measuring the relative amounts of substrates and separately identifiable products produced therefrom by a chemical reaction catalyzed by said enzymes. The present SMSBEA assays are particularly well suited to enzyme-substrate systems in which both the substrate(s) and product(s) have mobilities such that they can be separated on short chromatography columns. The method of the invention is also particularly well suited to HTS applications in which an enzyme agonist or antagonist is sought. An advantage of the method is that the effects of a test compound on several enzymes may be analyzed simultaneously and without substantial purification of the enzyme solution, *e.g.*, whole cell lysates.